

# Work Order ID 83126

April-13-12 8:30:03 AM

ASAP

\*83126\*

Page 1

Item ID: D4617-1

Accept

\*N900040100\*

Setup Start \*NS1\*

Revision ID:

Item Name: Rail

Stop \*NS2\*

Start Date: 13/04/2012 Start Qty: 2.00

\*2\*

Cust Item ID:

Required Date: 20/04/2012 Req'd Qty: 2.00

\*2\*

Customer:

Reference:

Approvals: Process Plan: MCT

Date: 12/04/13 Tooling:

Date:

Run Start \*NR1\*

QC:

Date: SPC (Y/N):

Date:

Stop \*NR2\*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
<b>Draw Nbr</b>	<b>Revision Nbr</b>								
D4617	A								
100		0.00							
<b>*100*</b>									
Large Fab	Memo	0.00							
Large Fab	1- Cut tube at 76.10".								
	2- Deburr								
110	QC6- Inspect dimensions to drawing	0.00							
<b>*110*</b>									
QC	Memo	0.00							
Quality Control									
120	Identify as per dwg & Stock Location:	0.00							
<b>*120*</b>									
Packaging	Memo	0.00							
Packaging									

#154617-041  
83120

24F  
12-05-03

12-4-19 21

(12)

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_  
 Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

**Work Order ID 83126**

April-13-12 8:30:03 AM

**\*83126\***

Page 2

Item ID: D4617-1

Accept

**\*N900040100\***Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Rail

Start Date: 13/04/2012 Start Qty: 2.00

**\*2\***

Cust Item ID:

Required Date: 20/04/2012 Req'd Qty: 2.00

**\*2\***

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start **\*NR1\***

QC:

Date:

SPC (Y/N):

Date:

Stop **\*NR2\***Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

130

QC21- Final Inspection - Work Order Release

0.00


**\*130\***

QC

Memo

0.00

Quality Control

12/5/3 

12-05-2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

April-13-12 8:30:07 AM

Work Order ID: 83126

Parent Item: D4617-1

Parent Item Name: Rail

\*83126\*

\*D4617-1\*

Page 1

Start Date: 13/04/2012

Required Date: 20/04/2012

Start Qty: 2.00

Required Qty: 2.00

Comments: IPP REV:A 12.04.12 NEW ISSUE DD VERF:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
M4130NT0.750W.035		Purchased	No			100	f	96.0000	6.34	13.34737			

\*M4130NT0 750W 035\*

4130 RD TUBE .750 X .035W

\*\*

B-12-4-19

Location

Loc Qty

Loc Code

MAT032

96

121250

96

~~13.3~~ 15'

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

ITEM	QTY	P/N	DESCRIPTION
	X	D4617-041	EMERGENCY ESCAPE LADDER
1	1	D4617-043	LADDER WELDMENT
2	4	D4617-045	CLAMP ASSY
3	4	D4618-041	CLAMP ASSY COVER
4	2	D4621-1	DECAL
5	1	D4621-3	DECAL
6	4	D4625-1	TUBE CAP

D4617-045  
CLAMP ASSEMBLY  
4 PL

D4618-041  
CLAMP ASSY COVER  
4 PL  
(SHOWN REMOVED THIS LOCATION)

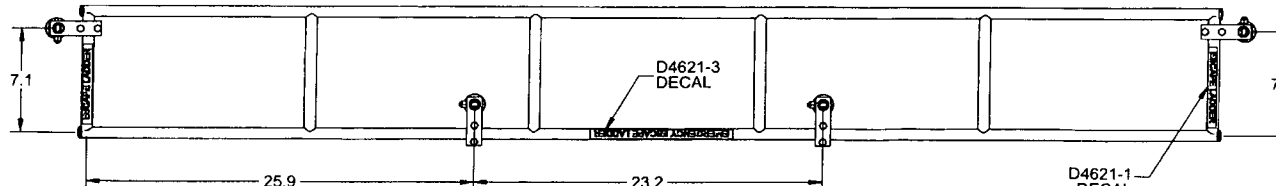
D4617-043  
LADDER WELDMENT

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 83126 HLT

12/04/13

D4625-1  
TUBE CAP  
4 PL

(CLAMP ASSY COVERS REMOVED FOR CLARITY)



### D4617-041 EMERGENCY ESCAPE LADDER

#### NOTES:

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: IDENTIFY WITH DART P/N "D4617-041" AND BATCH NUMBER PER QSI044 6.6
- 7) WEIGHT: 6.46 lbs

A	NEW ISSUE	RP	12.04.02
REV.	DESCRIPTION	BY	DATE
DESIGN	RP		
DRAWN	RP		
CHECKED	AD		
MFG. APPR.	AD		
APPROVED	AD		
DE APPR.	AD		
DATE	12.04.02		
<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA DRAWING NO. <b>D4617</b> TITLE <b>EMERGENCY ESCAPE LADDER</b> SCALE <b>NTS</b> COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD			

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

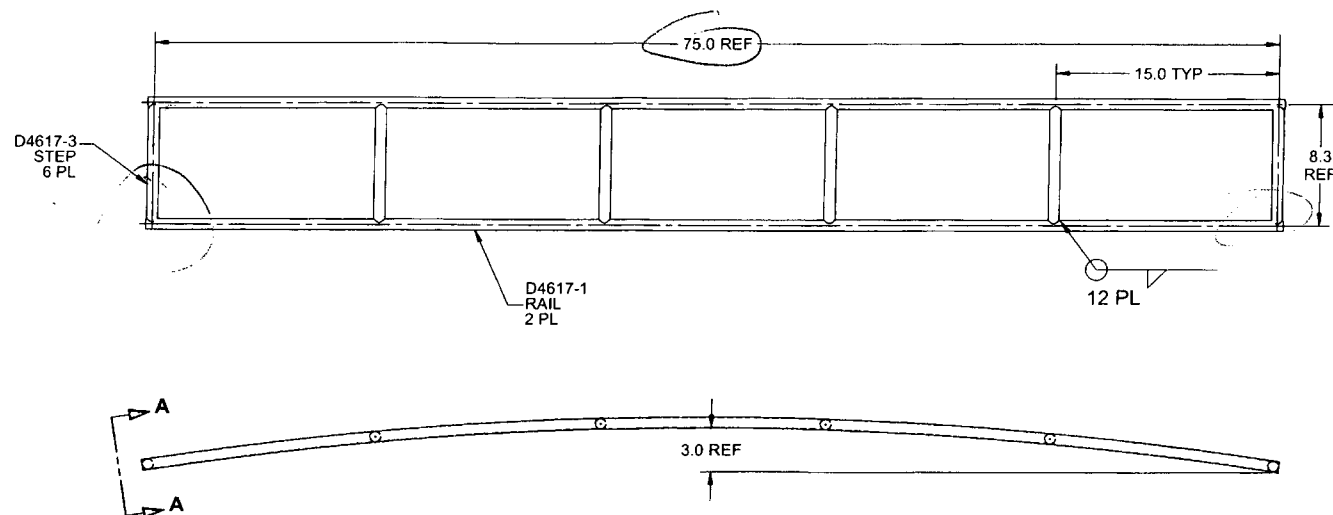
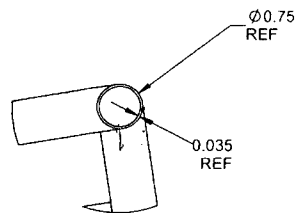
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



83126



**D4617-043 LADDER WELDMENT**

RELEASED  
2012-04-10

**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: POWDER COAT FIRE RED (4.3.5.10) PER DART QSI 005 4.3
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI044 6.6
- 7) WEIGHT: 4.5 lbs
- 8) WELDING: PER DART QSI 004

DESIGN	RP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED	A.D.	DRAWING NO. <b>D4617</b>	REV. A
MFG. APPR.	[Signature]	SHEET 2 OF 5	
APPROVED	[Signature]	TITLE	SCALE
DE APPR.	[Signature]	<b>EMERGENCY ESCAPE LADDER</b>	NTS
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**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

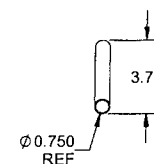
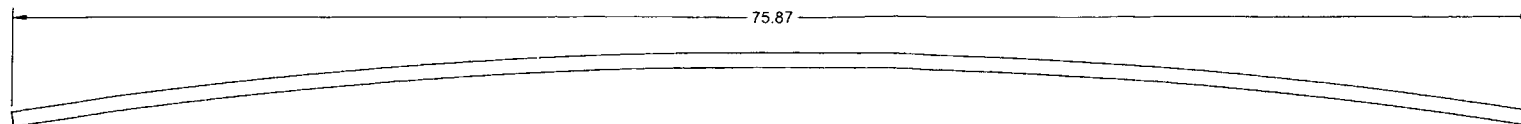
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

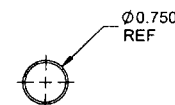
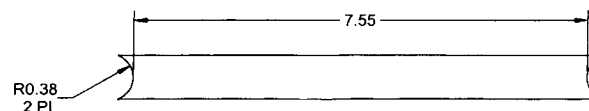
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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

831.26



**D4617-1 RAIL**



**D4617-3 STEP**

**NOTES:**

- 1) MATERIAL: AISI 4130N STEEL TUBING PER MIL-T6736  
OR AMS6371, 6360, 6361, 6362, 6373, 6374  
REF DART SPEC M4130NT0.750V.035
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI044 6.6
- 7) WEIGHT: D4617-1 1.7lbs  
D4617-3 0.17lbs

RELEASED  
2012-04-18

DESIGN	RP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED	A.P.	DRAWING NO. <b>D4617</b>	REV. A
MFG. APPR.	J.F.	SHEET 3 OF 5	
APPROVED	J.M.D.	TITLE	SCALE
DE APPR.		<b>EMERGENCY ESCAPE LADDER</b>	NTS
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W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

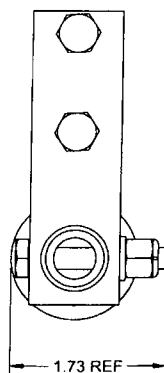
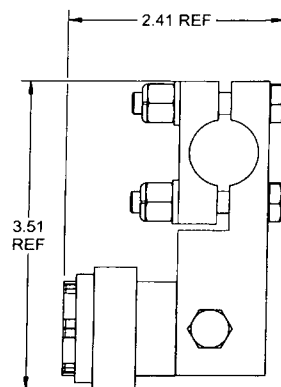
Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

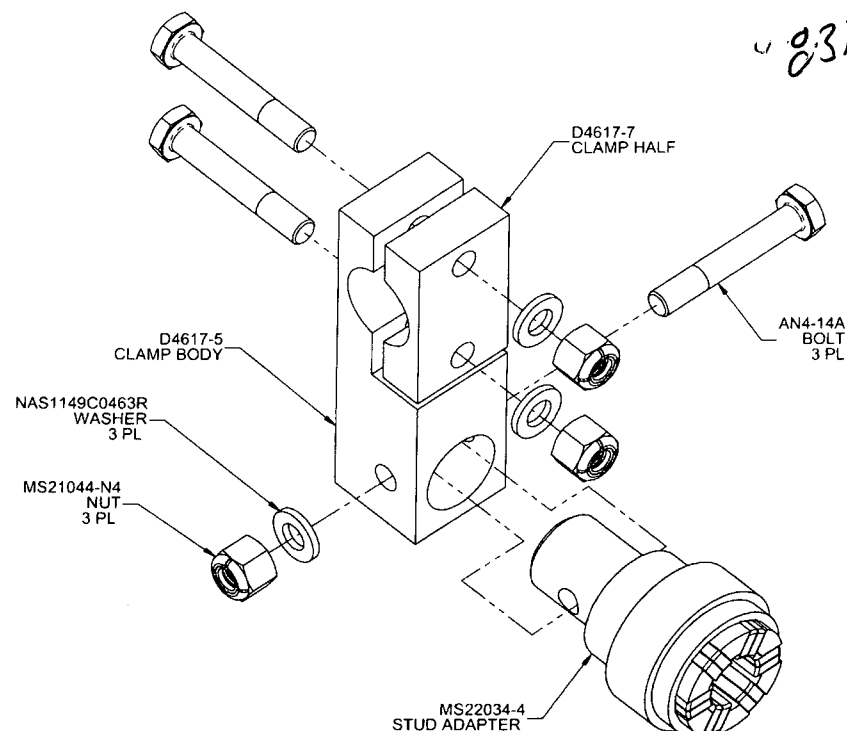
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

ITEM	QTY	P/N	DESCRIPTION
	X	D4617-045	CLAMP ASSEMBLY
1	1	D4617-5	CLAMP BODY
2	1	D4617-7	CLAMP HALF
3	3	AN4-14A	BOLT
4	3	MS21044-N4	NUT
5	1	MS22034-4	STUD ADAPTER
6	3	NAS1149C0463R	WASHER



**D4617-045 CLAMP ASSY**



**NOTES:**

- 1) MATERIAL: N/A
- 2) FINISH: N/A
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI044 6.6
- 7) WEIGHT: 0.5 lbs

DESIGN	RP	<b>DART AEROSPACE LTD</b>	
DRAWN	RP	HAWKESBURY, ONTARIO, CANADA	
CHECKED	D.S.	DRAWING NO.	REV. A
MFG. APPR.	E.S.	D4617	SHEET 4 OF 5
APPROVED	10/11	TITLE	SCALE
DE APPR.		EMERGENCY ESCAPE LADDER	NTS
DATE	12.04.02	COPYRIGHT © 2012 BY DART AEROSPACE LTD	
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RELEASED  
2012-04-18

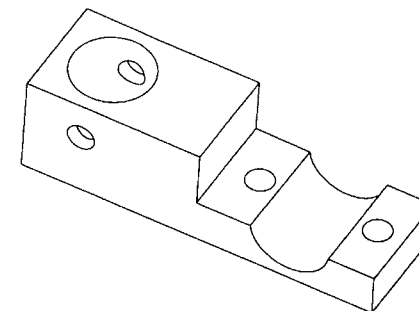
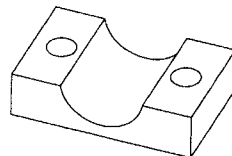
W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

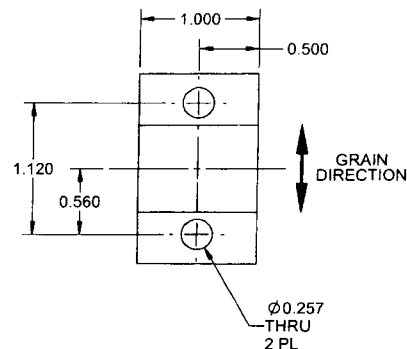
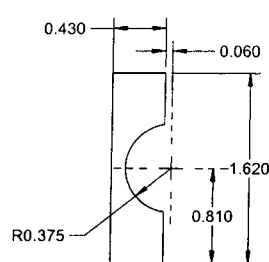
Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
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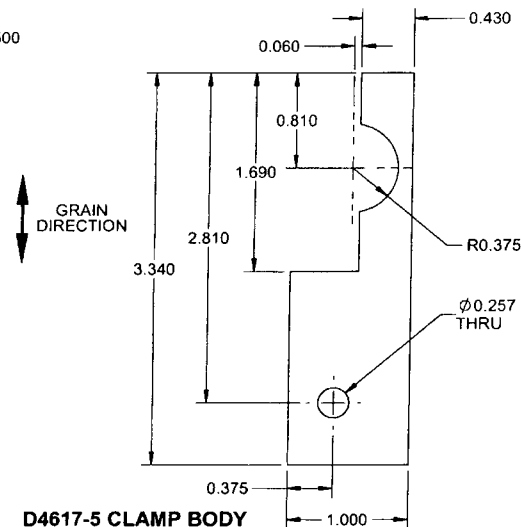
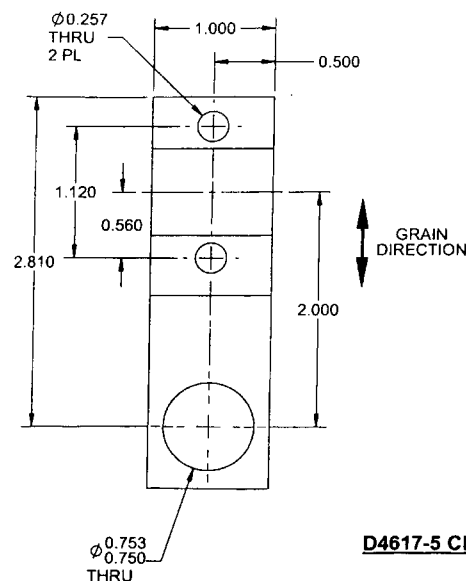
**NOTE:** Date & initial all entries



83126



**D4617-7 CLAMP HALF**



**D4617-5 CLAMP BODY**

**NOTES:**

- 1) MATERIAL: 6061-T6/T651/T6510/T6511/T62 ALUMINUM BAR  
PER QQ-A-225/8 OR AMS-QQ-A-225/8 OR  
AMS 4117/4128/4115/4116 OR QQ-A-200/8  
OR ASTM B211 OR ASTM B221  
REF DART SPEC M6061T6B
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: PER DART QSI 044 6.6 OR 6.7
- 7) WEIGHT: D4617-5 0.17 lbs  
D4617-7 0.05 lbs
- 8) POSSIBLE SUPPLIER: D4617-5: EAGLE P/N 212-110-06  
D4617-7: EAGLE P/N 212-110-07

RELEASED  
2012-04-10

DESIGN	RP	<b>DART AEROSPACE LTD</b> HAWKESBURY, ONTARIO, CANADA	
DRAWN	RP		
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	<i>[Signature]</i>	<b>D4617</b>	SHEET 5 OF 5
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	<b>EMERGENCY ESCAPE LADDER</b>	NTS
DATE	12.04.02	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD	

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



# Receiving Report

Date: 12/4/3

Batch No: M/2/200

Supplier: Pacific Steel

Dart P/O: 16508

Packing Slip: Yes ☒ No ☐  
 Invoice: Yes ☐ No ☒  
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐  
 Waybill Attached: Yes ☒ No ☐  
 Shipment Complete: Yes ☒ No ☐ N/A ☐  
 QC6 Inspection ✓ 12/10/04 N/A ☐  
 Work Order ☐ N/A ☐

## Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) Level 12   

Production/Admin: 12/4/3  
 Date     
 Received/Costing     
 Initial   

Location

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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**NOTE:** Date & initial all entries

All amounts are calculated in domestic currency.

Purchase Order ID/ Curr Type	Line Nbr/ Insp Req	Project ID	Reference/ Description/ Cert Std	PO U/M / Stock U/M	Required Date Required Qty	Recv Date/ Recv Emp	Recv Qty (PO U/M)	Cost Per Unit/ Recv Value	Inspected Qty/ Rejected Qty (PO U/M)	MRB Qty/ MRB Reject Qty	Book Amt
VendorID\Vendor Name		VU-FAC001	Factory Steel								
PO16558	1		M4130NT0.750W.03 f		4/2/2012	4/2/2012	96.0000	\$6.54	0.0000	0	\$627.84
USD	No		5 4130 RD TUBE .750 f X .035W 121250		96.0000	DESJ02		\$627.84	0.0000	0	
	2		M4130NT1.000W.04 f		4/2/2012	4/2/2012	24.0000	\$8.27	0.0000	0	\$198.48
	No		9 4130 RD Tube 1.00 f X .049"W 121250		24.0000	DESJ02		\$198.48	0.0000	0	
	3		71475-25	Each	4/2/2012	4/2/2012	1.0000	\$35.00	0.0000	0	\$35.00
	No		PACKING MATERIAL 121250		1.0000	DESJ02		\$35.00	0.0000	0	

<b>Total Received Quantity:</b>	121.0000
<b>Total Qty to Inspect (PO U/M):</b>	0.0000
<b>Total Reject Quantity:</b>	0.0000
<b>Total Receipt Value:</b>	\$861.32
<b>Total Balance Due Quantity:</b>	0.0000

# Dart Aerospace Ltd

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# PACKING LIST

No. 31454 PG 1 OF 1



PL

FACTORY STEEL & METAL SUPPLY 14020 OAKLAND AVENUE DETROIT, MI 48203  (313)883-6300 PHONE (313)883-4883 FAX		PURCHASE ORDER # P016558 JOB NAME		BUYER CHANTEL CLAVOIE Tel (613) 632-3336 Fax (613) 632-4443		SHIP DATE 03/28/2012 SHIP VIA YRC	
SOLD TO DART AEROSPACE 1270 ABERDEEN STREET HAWKESBURY, ON K6A 1K7		SALES ORDER # 26912 ORDER DATE 03/27/2012		SALES REP MICK HALON SHIP INST YRC PRO# 761-530-2249 TERMS NET 30 DAYS		RESALE # 59-2958719 CARRIER YRC BLIND Y/N N FOB DETROIT	

LINE	PCS	QUANTITY	DESCRIPTION	WIDTH	LENGTH	WEIGHT	UNIT PRICE	TOTAL
1	4	96 FT	RETURN SIGNED FOR PROMPT PROCESSING FAX #313-883-4883  X _____  RD-N34035 4130N CD SMLSS RD TUBE 3/4" OD X .035W  Our Tag #      Heat #      Pcs      Total Ft 75718      540842      4      96		24' RL	25.660		
2	1	24 FT	RD-N.1049 4130N CD SMLSS RD TUBE 1" OD X .049W  Our Tag #      Heat #      Pcs      Total Ft 75719      542842      1      24		23'/24' RL	11.944		
3	1		PACK PACKING CHARGES  MTRS (CIRCLE)    FAX    SHIPMENT    INVOICE    ALL - DATE: _____ INITIAL: _____					

*P/4/3/2*

TOTAL WT 37 LBS		TOTAL	
RECEIVED BY - SIGNATURE	RECEIVED BY - PRINTED NAME	DATE RECEIVED	



SO

**Dart Aerospace Ltd**

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**PLYMOUTH TUBE CO. USA**

1209 East 12th Street, Streator, Illinois 61384  
Phone: (815) 673-1515 Fax: (815) 672-7343

## PRODUCT CERTIFICATION

SALES ORDER - LINE ITEM/RLS  
043167 - 1 / 0

SOLD TO

Factory Steel & Metal Supply C  
14020 Oakland Avenue  
Detroit, MI 48203  
USA

WORK ORDER 013354  
HEAT NUMBER 540842  
MELT SOURCE Benteler Steel & Tube-Germany

ISO 9001:2000  
AND  
TS 16949:2002  
CERTIFIED

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LADING NO	SHIPMENT DATE										
8150														
<b>PART DESCRIPTION H07500350J400</b> OD: 0.7500" Max: 0.7550" Min: 0.7500" Wall: 0.0350" Max: 0.0380" Min: 0.0320" Length: 19.00' /26.00' Spec: Mil-T 6736B Seamless Aircraft Grade: 4130 Finish: Cond N														
<b>CERTIFICATION REQUIREMENTS</b> This material meets the requirements of AMS 6371H and 6360K. This material was Eddy Current tested and conforms to the requirements of ASTM A-450. This material is stress relief annealed. The final annealing temperature was 1150 degrees fahrenheit. The Grain size is determined and reported by the raw material supplier in accordance to ASTM E-112. This raw material was magnetic particle inspected by the raw material supplier in accordance to AMS 2640J and/or ASTM E-1444, and rated as Frequency, and Severity to AMS 2301, latest revision. Yield is determined by using the 0.2% offset method.														
<b>Chemical Analysis</b>														
C	Mn	P	S	Si	Al	Cr	Mo	Ni	Pb	Cu	V	Ti	Sn	
.310	.55	.005	.003	.220	.036	.92	.17	.09	.001	.10	.002	.003	.009	
<b>Physical Properties</b>														
Freq.	Severity	Grain Size												
.098	.063	9												
<b>Mechanical Properties</b>														
<b>TEST</b>	<b>UNITS</b>	<b>#TESTS</b>	<b>HIGH</b>	<b>LOW</b>	<b>AVERAGE</b>	<b>STD-DEV</b>								
Tensile	Psi	6	112040	110270	111147	657								
Yield	Psi	6	108250	105140	105762	384								
Elongation	%	6	22	18	20	1								
Rockwell B	Rb	6	97	97	97	0								
Rockwell C	Rc	6	17	17	17	0								
<b>TEST</b>	<b>RESULT</b>													
Decarb/OD	Pass													
Total ID/OD decarb	Pass													
<b>Additional Specification(s)</b>														
AMS-T 6736A, 6360L & 6371J														

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Streator in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

*Rakal*  
Quality Assurance

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries





**PLYMOUTH TUBE CO. USA**

1209 East 12th Street, Streator, Illinois 61384  
Phone: (815) 673-1515 Fax: (815) 672-7343

## PRODUCT CERTIFICATION

SALES ORDER - LINE ITEM/RLS  
045607 - 1 / 0

SOLD TO

Factory Steel & Metal Supply C  
14020 Oakland Avenue  
Detroit, MI 48203  
USA

WORK ORDER 013989  
HEAT NUMBER 542842  
MELT SOURCE Benteler Steel & Tube-Germany

ISO 9001:2000  
AND  
TS 16949:2002  
CERTIFIED

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LADING NO	SHIPMENT DATE									
8310													
<b>PART DESCRIPTION H10000490J900</b> OD: 1.0000" Max: 1.0050" Min: 1.0000" Wall: 0.0490" Max: 0.0540" Min: 0.0440" Length: 19.00' / 26.00' Spec: Mil-T 6736B Seamless Aircraft Grade: 4130 Finish: Cond N													
<b>CERTIFICATION REQUIREMENTS</b>													
<b>Chemical Analysis</b>													
C	Mn	P	S	Si	Al	Cr	Mo	Ni	Pb	Cu	V	Ti	Sn
.300	.55	.008	.008	.240	.033	.91	.17	.10	.001	.14	.002	.003	.011
<b>Physical Properties</b>													
Freq.	Severity	Grain Size											
.107	.078	9											
<b>Mechanical Properties</b>													
<b>TEST</b>	<b>UNITS</b>	<b>#TESTS</b>	<b>HIGH</b>	<b>LOW</b>	<b>AVERAGE</b>	<b>STD-DEV</b>							
Tensile	Psi	3	112710	110700	111613	1017							
Yield	Psi	3	108520	107180	108050	754							
Elongation	%	3	22	20	21	1							
Rockwell B	Rb	3	100	100	100	0							
Rockwell C	Rc	3	20	20	20	0							
<b>TEST</b>	<b>RESULT</b>												
Decarb/OD	Pass												
Total ID/OD decarb	Pass												
<b>Additional Specification(s)</b>													
AMS-T 6736A, 6360L & 6371J													
<p>-----</p> <p>This test report data is for the heat Chemistry Stated above.</p> <p>The material in this test report is:</p> <p>1) Free from <u>Polybrominated Biphenyls (PBB), Polybrominated Diphenyl Ethers</u></p>													

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*Rakob Uke*  
Quality Assurance

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



**PLYMOUTH TUBE CO. USA**

1209 East 12th Street, Streator, Illinois 61364  
Phone: (815) 673-1515 Fax: (815) 672-7943

**PRODUCT CERTIFICATION**

SALES ORDER - LINE ITEM/RLS  
045607 - 1 / 0

WORK ORDER 013989  
HEAT NUMBER 542842  
MELT SOURCE Benteler Steel & Tube-Germany

SOLD TO

Factory Steel & Metal Supply C  
14020 Oakland Avenue  
Detroit, MI 48203  
USA

ISO 9001:2000  
AND  
TS 16949:2002  
CERTIFIED

CUSTOMER P.O.	CUSTOMER PART	QUANTITY	LADING NO	SHIPMENT DATE
8310				
<p>(PBDE), and <u>Mercury</u> contamination.</p> <p>2) <u>NAFTA</u> compliant.</p> <p>End of Certification</p>				

I certify that the results are a true and correct copy of the records prepared and maintained by Plymouth Tube Company, Streator in compliance with the requirements of the cited specification. Chemistry is as reported by the Steel supplier. This test report cannot be reproduced or distributed except in full without the written permission of Plymouth Tube.

*Rakobekhe*

Quality Assurance

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries



Dart Aerospace Ltd.  
1270 Aberdeen Street  
Hawkesbury, ON K6A 1K7  
Tel: 613 632 9577  
Fax: 613 632 1053

## PURCHASE ORDER

Purchase Order ID PO16558

Purchase Order Date 3/26/12

PO Print Date 3/26/12

Page Number 1 of 1

Order From :

VU-FAC001

FACTORY STEEL  
14020 OAKLAND AVE.  
DETROIT,, MI 48203  
US

Contact Name

Vendor Phone 313 883 6300

Vendor Fax 313 883 4883

Vendor Account Nbr

Buyer

Requisition Nbr

Tax Resale Nbr

Terms

Currency

FOB

Chantal Lavoie

10127-2607

Net 30

USD

Destination-Collect

Ship To :

DART AEROSPACE LTD 1270 ABERDEEN  
HAWKESBURY, ON K6A 1K7  
CANADA

**FAXED**  
03/26/12

e-mail mich

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	M4130NT0.750W.035 032	4130 RD TUBE .750 X .035W	4/02/12 Yes	96.00 f	Yellow Standard	\$6.5400	\$627.84
		Special Inst:	MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6361/6362 6373/6374				
2	M4130NT1.000W.049 032	4130 RD Tube 1.00 X .049"W	4/02/12 Yes	24.00 f	Yellow Standard	\$8.2700	\$198.48
		Special Inst:	MATERIAL: AISI 4130N STEEL TUBING AS PER MIL-T-6736 OR AMS 6371/6360/6361/6362 6373/6374				
3		PACKING MATERIAL	4/02/12 Yes	1.00 Each	Yellow Standard	\$35.0000	\$35.00
		MATERIAL CERTIFICATION REQ'D UPON DELIVERY					
PO Total:							\$861.32

PO Instructions:

PLEASE SHIP YELLOW TRANSPORT COLLECT

No substitution or deviation without  
consent.  
Certificate of Conformity or Material  
Certification required when applicable

Change Nbr: 2

Change Date: 3/26/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries